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Full length Research Paper

Effect of cognitive behavioural therapy (CBT) anger management module for adolescents

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This research was intended to examine the effect of Cognitive Behavioural Therapy (CBT) anger management module on anger expressions among adolescents. The respondents for this study involved 43 adolescents aged 15 to 16 years old from four secondary schools in Penang Island. They were among the 318 participants from four schools who identified with high T-scores value of 60 and above in their Reactive Anger (RA), Instrumental Anger (IA) and/or Total Anger (TA) from Adolescent Anger Rating Scale (AARS) instrument. Both quantitative and qualitative methods were used to gather data. Data were analysed using paired-samples t-test and independent-samples t-test with SPSS 22.0. Meanwhile, the feedback interview transcripts obtained from interviews with respondents; participated school counsellors and school discipline teachers were analysed using content analysis. The qualitative results served to cross-check the credibility of the quantitative results. Four interventions such as the cognitive restructuring, relaxation through slow deep breathing, communication skills, and problem-solving routine were taught through the eight weekly group counselling intervention sessions. Results from both the quantitative and qualitative data had shown a positive effect of CBT anger management module on anger expressions among adolescents. Reduction in respondents' T-scores value of TA from pre-test to post-test and follow-up test had shown that the Cognitive Behavioural Therapy (CBT) module is effective in helping respondents to manage their anger. Therefore, this CBT anger management module can be proposed to be used as a guideline in guidance and counselling sessions for anger problem. The practical implications and research limitations are discussed.

Keywords: Anger; anger management; adolescents; Cognitive Behavioural Therapy (CBT)

INTRODUCTION

Anger is one of the most common feelings and a highly prevalent emotion with potentially destructive consequences, experienced by everyone at one time or another in their daily life (Parker, 2007; Mills, 2005). Anger is a strong feeling of distress in response to a specific provocation (Lawson, 2009). People are uncertain about how to control or self-restraint their aggression and at the same time continue to be assertive in self-expression. Hence, they become angry when others attack their personality, treat them unfairly, keep them from getting what they want or violate cultural norms (Marby & Kiecolt, 2005).

When people become angry, they will behave in different ways which involve a combination of cognitive, physiological, behavioural and social components (O'Neill, 2006). For example, some will react recklessly and become abusive or extremely defensive. Whereas some people will bottle up their negative emotions and

hurt or hide their anger to themselves (O'Neill, 2006). Adolescents between eleven to eighteen years old have egos that are much more insecure and more fragile than fully fledged adults (Blum, 2001). Their involvements in aggressive displays in many events are often playful and harmless initially. They may just want to test out physical and mental boundaries through their interactions with each other. However, if they display it in an inappropriate way, it might degenerate into disruptive aggressive situations (Blum, 2001). Therefore, teaching them how to manage their anger in a productive manner like being assertive, to stop and think before they act is essential. As such, the purpose of this research is to examine the effect of cognitive behavioural therapy (CBT) anger management module adapted by the researcher to help adolescents with anger problems.

Relevant Research

Anger has been identified as a major problem in human relations (Fiore & Novick, 2005). It plays a significant role because it occurs frequently in daily lives. However, less is known about anger than all other emotions, such as anxiety and depression (Kassinove & Sukhodolsky, 1995). The insufficiency of anger research is due to the lack of operational definitions (DiGiuseppe & Tafrate, 2007). There is no primary anger disorder included in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), (APA, 2013) because the inappropriate or excessive anger is included among the criteria for certain disorders such as conduct disorder, oppositional defiant disorder, and intermittent explosive disorder (APA, 2013). The lack of a unified diagnostic category makes the systematic study of maladaptive anger difficult (DiGiuseppe & Tafrate, 2007; Martin, 2004). As a result, mental health professionals are unable to diagnose anger disorders and have been slow in recognizing anger as being worthy of attention (Martin, 2004).

Furthermore, the term anger, aggression, hostility, and violence are commonly used, yet they seem not to have an absolute definition (O'Neill, 2006). People always confuse anger with aggression (O'Neill, 2006; Reilly & Shopshire, 2002). Most of the studies conducted on children also focused on aggression rather than anger (Burney, 2001). A few studies were focused on anger expression, even though anger often occurs without aggression (Rieffe & Meerum Terwogt, 2006). Only in the recent decade, many researchers have started to pay attention to anger and violence (Kitamura & Hasui, 2006; Slep & O'Leary, 2007).

Anger is a profoundly uncomfortable emotion leading to aggressive behaviour and violence which makes it dangerous for many people (Luutonen, 2007) because anger requires expression (Hall, 2009). At the inter-personal level, anger can help clarify needs, wants, and desires (Schmitz, 2005). Much like pain and fear, it serves as a kind of physiological warning device which alerts us that something is wrong and needs to be attended to. A person can become enraged or even furious due to anger (O'Neill, 2006) if their needs, wants, and desires are not met.

Anger also positively associated with delinquent behaviour (Sigfusdottir, Farkas, & Silver, 2004). Research by Campano and Munakata (2004) has revealed that anger which results in aggression contributing to juvenile delinquency in school has been alarmingly increasing (Campano & Munakata, 2004). Schools have become a place of anger and violence for more and more students (Blum, 2001). Adolescents who venture into anger and aggression would wreak havoc in their lives and the lives of those around them (Engel, 2004). Their uncontrolled anger causes them to face difficulties in social adjustment like destroying relationships, health, careers, the joy of living (Feindler & Engel, 2011; Schiraldi & Kerr, 2002) and their everyday challenges could turn into explosive battlegrounds (Schiraldi & Kerr, 2002).

In Malaysia, adolescents' involvements in criminal cases are also increasingly worrying. Many incidences of school violence and crimes involving adolescents highlighted in the mass media were related to uncontrolled anger (Norisham, 2010). The chance of stopping this violent trend is extremely small unless corrections take place in a child's earliest age (Fiore & Novick, 2005). Therefore, introducing anger management interventions to increase the awareness of anger and providing training of skills for the students to learn some appropriate ways to manage their anger are essential. The most widely supported Cognitive Behavioural Therapy (CBT) has proven to be effective with a wide variety of clients, including aggressive children and juvenile delinquents in the last two decades (Beck, 1999).

CBT can be an effective time-limited treatment, especially when dealing with behavioural problems including anger (Hofmann, Anu Asnaani, Vonk, Sawyer, & Fang, 2012; Rebsdorf, 2011; Reilly & Shopshire, 2002; Curwen, Palmer & Ruddell, 2000). The CBT treatment model combines various interventions such as focusing on cognitive restructuring, relaxation, communication skills (O'Neill, 2006; Reilly & Shopshire, 2002) and problem-solving routines (O'Neill, 2006; Dobson, 2001). In CBT treatment, the client learns the appropriate ways to control their negative emotions of anger progressively. They learn to recognize and accept their negative emotions, detect their negative automatic thoughts which influenced by their underlying beliefs (Davies, 2008; Reilly & Shopshire, 2002; Beck, 1995). Once this process starts, the client is encouraged to look for evidence to support their unreasonable or unhelpful thoughts (beliefs) and to transform them into more adaptive and helpful thoughts (beliefs). A follow-up session is needed after the completion of the entire intervention sessions. It offers a productive way for continual support, reinforce client's newly

acquired knowledge and skills in CBT (O'Neill, 2006), and to determine whether the client's improvements is sustainable (Howells, Day, Bubner, Jauncey, Williamson, Parker, & Heseltine, 2002). The effect of the CBT interventions can only be evaluated with sufficient information in the data collected throughout the interventions (O'Neill, 2006).

In conclusion, although the prevalence of such program is increasing, there is minimal research on adolescents and little empirical evaluation of the effectiveness of such interventions (Cole, 2008). The overall efficacy of CBT treatment has also not been ascertained in Malaysian schools. Thus, this research is needed to study the effect of CBT treatment for anger management. The researcher adapted a CBT anger management module to target these deficits and to provide guidelines for the counsellors, practitioners and social workers to help the adolescents with the anger problem.

Purpose

The purpose of this research is to examine the effect of cognitive behavioural therapy (CBT) anger management module adapted by the researcher to help adolescents with anger problems.

METHODS

This research combines both the quantitative and qualitative methods. The quantitative method is based on a quasi-experiment without control group design where the data collection is obtained from the Adolescent Anger Rating Scale (AARS) instrument (Burney, 2001) used in this research study at pre-test, post-test and follow-up test. Whereas the qualitative method is based on interviews with the respondents, school counsellors, and school discipline teachers from the four participated schools. Various data collection methods used in this research study is for researchers to acquire a more in-depth information about the problem being studied (Creswell, 2012), to cross-check the consistency of the quantitative results for a more credible findings, and to minimize any extraneous threats and weaknesses from this quasi-experiment without control group design.

Sample

This study involved 440 students aged between 15 to16 years old from six government-aided secondary schools in Penang Island. The schools were identified through a stratified sampling procedure based on the demographic characteristics. Thereafter, a purposive sampling procedure was conducted to identify the schools with the highest number of students with the high risk of anger problem from an Adolescent Anger Rating Scales (AARS) instrument to be recruited as respondents for this research study.

According to AARS Professional Manual (Burney, 2001), respondents with high T-score values of 60 and above in their Total Anger (TA), Instrumental Anger (IA) and/or Reactive Anger (RA) need to be recommended for a treatment plan to deal with their anger (Burney, 2001). From the purposive sampling procedure, four schools out of the six schools with the highest number of students with anger problem were identified. Among the 318 students from the four schools, only 43 students had their anger expression scores at the T-score values of 60 and above. Therefore, they were recruited as respondents for this study.

The four selected schools: School A, School B, School C, and School D were renamed as Group 1, Group 2, Group 3, and Group 4 in the counselling intervention sessions. All the 43 students, 22 are male students and 21 are female students. They were granted permission by their parents/guardians and had agreed to participate in this research study. Each of these schools had between eight to twelve students follow the suggestion by Jacobs, Masson and Harvill (2009), that the number of members in a group counselling or group therapy can be ranged from 5 to 8 members although there can be as few as 3 and as many as 12. The 43 respondents are from three main ethnics: Malay, Chinese, and Indians. Coincidently, 36 (83.8%) students were from the Malay ethnic. Only 3 (6.9%) were Chinese students and 4 (9.3%) were Indians students. However, ethnicity and gender are not the focus of this study. Therefore, these two factors would not affect the research findings later.

Instruments

Adolescent Anger Rating Scale (AARS)

The AARS is a standardized instrument by Burney (2001), used as a measurement tool for this study. It is a psychometrically sound instrument which measures anger expression and anger control of an adolescent. It is also the first and only assessment instrument designed specifically to assess the level of anger expressions and to differentiate between the two specific dimensions or patterns of anger which are the reactive anger (RA) and the instrumental anger (IA) in adolescents (Burney, 2001).

AARS is a self-report questionnaire which consists of 41 items on 4-point Likert scales. Participants are required to rate each item according to the Likert scales (1=hardly ever; 2=sometimes; 3=often; and 4=very often) in the questionnaire. According to Larsen and Prizmic (2006), self-report is an accurate way of measuring emotions, particularly because participants have direct knowledge about their own emotions. AARS is easy to administer. It requires administration time between 10 to 20 minutes for each group setting (Burney, 2001).

Procedure

Administrative procedure

Before the intervention sessions began, a written consent of approval to participate in this study signed by the students' parents/guardians were required. Similarly, the students were to sign an agreement that their participation in this research study are of their own free will, which in line with the counsellors' Code of Ethics (Lembaga Counsellor, 2011). Hence, would give their full cooperation and commitment. The eight weekly group counselling intervention sessions and the follow-up session were conducted according to gender upon the students' request that they feel more comfortable to share their personal problems in their own gender group. The initial plan to have both genders for each group counselling intervention sessions was restructured by the researcher in accordance to the students' request.

Each intervention session was carried out based on the time allocated in the Cognitive Behavioural Therapy (CBT) Anger Management Module. Before the intervention sessions began, a brief meeting with all the participated students, later addressed as respondents in the counselling sessions was carried out by the researcher on an appointed date suggested by the school counsellors. The brief meeting was for the researcher to explain the group interventions' plan to the respondents in each school. At the same time, to determine the eligibility of the respondents in this research study are all literate in reading and writing, without any psychiatric disorder, substance dependency or medication records from doctors as mentioned by Reilly and Shopshire (2002). The respondents were also told that they are not allowed to involve or be recruited into any other guidance and counselling sessions or programs organized by the school or outside the school before the CBT group counselling intervention sessions completed. The reasons were to avoid unnecessary confusion to the respondents and also to minimize all extraneous influences or to the research findings later.

Counselling procedure

The group counselling intervention sessions were carried out in the school counselling room. The duration of each intervention session is between 90 to 120 minutes. 10 to 20 minutes allocated in the beginning for each session were for check-in procedure and homework review. At the end of each session, respondents were given homework for self-practises because homework is an important part of CBT (Reilly & Shopshire, 2002). Besides, additional reading materials were given to enhance respondents understanding of certain facts and concepts of CBT. A follow-up session with each group was conducted one month later after the completion of the entire group counselling intervention sessions. The respondents are expected to continue to practise the CBT interventions learned. The list of intervention sessions in the module include: Session 1-introduction and overview of group anger management treatment; Session 2-understanding anger; Session 3-identify anger pattern and negative automatic thoughts (NATs); Session 4-restructuring negative automatic thoughts (NATs); Session 5-relaxation through slow deep breathing; Session 6-communication skills; Session 7-problem solving routine; and Session8-closure and termination of group session.

At the end of the closure and termination session, a post-test was carried out. All the respondents were to answer the AARS instrument within the time of 10-20 minutes. One month later, a follow-up test was conducted at the follow-up session using the AARS instrument again. The results obtained from the pre-test, post-test and follow-up test to analyse the effect of the module are done based on a paired-samples t-test, and an independent-samples t-test with Statistical Packages for Social Sciences (SPSS) version 22.0.

A short semi-structured group interview session with the respondents, school counsellors and school teachers in four participated schools were carried out at the end of the follow-up session. The interviews were conducted by the researcher (Creswell, 2012; Boeije, 2010; Gorden, 1980). The researcher is the right person to decide on the spot what or which questions to ask at times, how to formulate the questions, and they also need to immediately evaluate whether the answers provided by the respondents are sufficient for the research findings (Creswell, 2012; Boeije, 2010; & Gorden, 1980). The interviews were to gather feedbacks from different perspectives for a true understanding on how the module has benefited the respondents. At the same time, to cross-examine the quantitative results for a more accurate and more credible research findings on the overall effect of this CBT anger management module. The qualitative results were analysed based on content analysis method on the interview transcripts.

RESULTS

Quantitative Results

The quantitative results are reported according to the five hypotheses formulated which correspond to the research questions respectively as follow:

$H_0$1: There is no significant effect of Cognitive Behavioural Therapy (CBT) Anger Management Module on anger expressions among adolescents in secondary schools.

$H_0$2: There is no significant effect of Cognitive Behavioural Therapy (CBT) Anger Management Module

on follow-up of anger expressions among adolescents in secondary schools.

$H_0$3a: There is no significant difference in anger expression before the intervention between male and female adolescents in secondary schools.

$H_0$3b: There is no significant difference in anger expression after the intervention between male and female adolescents in secondary schools.

$H_0$3c: There is no significant difference in the follow-up of anger expressions between male and female adolescents in secondary schools.

A paired-samples t-test is used to test the significant differences between the group at pre-test and post-test on the effect of Cognitive Behavioural Therapy (CBT) Anger Management Module on anger expressions among adolescents in secondary schools ($H_0$1). The result is presented in Table 1. From the statistical analyses shown in Table 1, the mean of pre-test for Total Anger (TA) (M=93.86, SD=11.657) and post-test for Total Anger (TA) (M=60.72, SD=3.794) differ significantly, where $t(42) = 18.744$, $p = .000 < .05$. The paired-samples t-test have shown that statistically there is a significant difference between the pre-test and the post-test on the effect of CBT Anger Management Module on anger expression among adolescents in secondary schools. Therefore, the null hypothesis ($H_0$1) is rejected.

Similarly, a paired-samples t-test to test the significant difference between the post-test and the follow-up test on the effect of Cognitive Behavioural Therapy (CBT) Anger Management Module on anger expressions among adolescents in secondary schools ($H_0$2) is presented in Table 2. The results shown in Table 2, with the mean of the post-test for Total Anger (TA) (M=60.72, SD=3.794) and follow-up test for Total Anger (TA) (M=56.12, SD=3.493) differ significantly, where $t(42) = 7.241$, $p = .000 < .05$. The paired-samples t-test analyses have also shown that there is significant difference statistically between the post-test and the follow-up test on the effect of CBT Anger Management Module on anger expression among adolescents in secondary schools. So, the null hypothesis ($H_0$2) is rejected.

As for null hypothesis ($H_0$3a), to compare the significance differences in anger expression between male and female adolescents in secondary schools before the CBT intervention, the researcher used the independent-samples t-test. The results is presented in Table 3. The independent-samples t-test analyses in Table 3 shows the mean of Total Anger (TA) pre-test scores for males (M=101.77, SD=8.842) is significantly higher, with $t(41)=6.329$, $p = .000 < .05$, than the scores of females (M=85.57, SD=7.890). The results have shown that there is significant difference detected in anger expression before the interventions on anger expression between male and female adolescents in secondary schools. Therefore, the null hypothesis ($H_0$3a) is rejected.

For hypothesis ($H_0$3b), to compare the significance difference in anger expression between male and female adolescents in secondary school after the CBT intervention, the researcher used the independent-samples t-test. The results is presented in Table 4. The mean scores of Total Anger (TA) in the post-test for the males (M=61.91, SD=3.728) is significantly higher, with $t(41) = 2.195$, $p = .034 < .05$, than the scores of females (M=59.48, SD=3.530). The results also showed that there is a significant difference observed in anger expression between male and female adolescents in secondary school after the CBT interventions on anger expression. Hence, the null hypothesis ($H_0$3b) is rejected.

Subsequently, for null hypothesis ($H_0$3c), an independent-samples t-test is used to compare the significant difference of anger expression between male and female adolescents for the follow-up session. The results is presented in Table 5. Table 5 shows the mean of Total Anger (TA) follow-up test scores for the males (M=56.86, SD=3.745), with $t(41) = 1.455$, $p = .153 > .05$, is not significantly higher than the scores of females (M=55.33, SD=3.104). The independent-samples t-test analyses reveal no statistically significant differences in anger expression during the follow-up session between the males and the females. Therefore, the null hypothesis ($H_0$3c) cannot be rejected.

In conclusion, the statistical data analyses for this study had revealed that there were significant differences detected between pre-test versus post-test and between post-test versus follow-up test on the effect of CBT Anger Management Module on anger expression among adolescents in secondary school. Anger expression between the male and female adolescents before and after the eight weekly groups counselling intervention sessions had also revealed that there is a significant difference. However, no significant difference is detected on anger expression between male and female adolescents at the follow-up test.

Table 1: Paired-Samples t-Test Data of Total Anger (TA) Pre-test and Total Anger (TA) Post-test

Paired Samples Statistics

		Mean	**N**	**Std. Deviation**	**Std. Error Mean**
Pair 1	Pre-test for Total Anger (TA) = Instrumental Anger (IA) + Reactive Anger (RA) + Anger Control (AC)	93.86	43	11.657	1.778
	Post-test for Total Anger (TA) = Instrumental Anger (IA) + Reactive Anger (RA) + Anger Control (AC)	60.72	43	3.794	.579

Paired Samples Test

		Paired Differences 95% Confidence Interval of the Difference		**t**	**df**	**Sig. (2-tailed)**
		Lower	**Upper**			
Pair 1	Pre-test for Total Anger (TA) = Instrumental Anger (IA) + Reactive Anger (RA) + Anger Control (AC) – Post-test for Total Anger (TA) = Instrumental Anger (IA) + Reactive Anger (RA) + Anger Control (AC)	29.572	36.707	18.744	42	.000

Significant level at $p < .05$

Table 2: Paired-Samples t-Test Data of Total Anger (TA) Post-test and Total Anger (TA) Follow-up Test

Paired Samples Statistics

		Mean	**N**	**Std. Deviation**	**Std. Error Mean**
Pair 1	Post-test for Total Anger (TA) = Instrumental Anger (IA) + Reactive Anger (RA) + Anger Control (AC)	60.72	43	3.794	.579
	Follow-up test for Total Anger (TA) = Instrumental Anger (IA) + Reactive Anger (RA) + Anger Control (AC)	56.12	43	3.493	.533

Paired Samples Test

		Paired Differences 95% Confidence Interval of the Difference		**t**	**df**	**Sig. (2-tailed)**
		Lower	**Upper**			
Pair 1	Post-test for Total Anger (TA) = Instrumental Anger (IA) + Reactive Anger (RA) + Anger Control (AC) - Follow-up test for Total Anger (TA) = Instrumental Anger (IA) + Reactive Anger (RA) + Anger Control (AC)	3.321	5.888	7.241	42	.000

Significant level at $p < .05$

Table 3: Independent-Samples t-Test Data of Total Anger Pre-test and Gender

Group Statistics					
Gender		**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
Pre-test for Total Anger (TA) = Instrumental Anger (IA) + Reactive Anger (RA) + Anger Control (AC)	Males	22	101.77	8.842	1.885
	Females	21	85.57	7.890	1.722

Independent –Samples T-Test									
		Levene's Test for Equality of Variances		t-test for Equality of Means					
		F	**Sig.**	**t**	**df**	**Sig. (2-tailed)**	**95% Confidence Interval of the Difference**	
Pre-test for Total Anger (TA)= Instrumental Anger (IA) + Reactive Anger (RA) + Anger Control (AC)	Equal variances assumed	.007	.933	6.329	41	.000	11.031	21.371
	Equal variances not assumed			6.346	40.822	.000	11.044	21.358

Significant level at $p < .05$; Significance of Levene's test is greater than .05, which it is here at .933, use the information on the first row.

Table 4: Independent-Samples t-Test Data of Total Anger Post-test and Gender

Group Statistics					
Gender		**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
Post-test for Total Anger (TA) = Instrumental Anger (IA) + Reactive Anger (RA) + Anger Control (AC)	Males	22	61.91	3.728	.795
	Females	21	59.48	3.530	.770

Independent –Samples T-Test								
		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	**Sig.**	**t**	**df**	**Sig. (2-tailed)**	**95% Confidence Interval of the Difference**	
Post-test for Total Anger (TA) = Instrumental Anger (IA) + Reactive Anger (RA) + Anger Control (AC)	Equal variances assumed	.225	.638	2.195	41	.034	.195	4.671
	Equal variances not assumed			2.198	40.998	.034	.198	4.668

Significant level at $p < .05$; Significance of Levene's test is greater than .05, which it is here at .638, use the information on the first row.

Table 5: Independent-Samples t-Test Data of Total Anger Follow-up Test and Gender

Group Statistics

Gender		N	Mean	Std. Deviation	Std. Error Mean
Follow-up test for Total Anger (TA) = Instrumental Anger (IA) + Reactive Anger (RA) + Anger Control (AC)	Males	22	56.86	3.745	.799
	Females	21	55.33	3.104	.677

Independent –Samples T-Test

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	95% Confidence Interval of the Difference	
Follow-up test for Total Anger (TA) = Instrumental Anger (IA) + Reactive Anger (RA) + Anger Control (AC)	Equal variances assumed	.202	.656	1.455	41	.153	-.594	3.654
	Equal variances not assumed			1.461	40.225	.152	-.586	3.646

Significant level at $p < .05$; Significance of Levene's test is greater than .05, which it is here at .656, use the information on the first row.

Qualitative Results

The content analysis's results revealed that the Cognitive Behavioural Therapy (CBT) anger management module is indeed effective in helping adolescents who have anger problems to manage and to control their anger. The results obtained had affirmed the credibility of the quantitative results. The four interventions in CBT Anger Management Module which include the negative automatic thoughts (NATs), relaxation through slow deep breathing, communications skills, and problem-solving routine in the module had positively impacted the respondents' progress in managing their anger. From the feedback interview sessions, all the respondents had successfully identified at least two CBT interventions as their anger control plan which worked effectively in helping them to manage their anger problems. Both the qualitative and the quantitative data analysis results obtained will be discussed further.

DISCUSSION

Four interventions such as cognitive restructuring; relaxation through slow deep breathing; communication skills; and problem-solving routine were included in the CBT Anger Management Module. Statistical data analyses from a paired-samples t-test had revealed that significant differences were identified between pre-test versus post-test, and post-test versus follow-up test and continuous reduction in mean value of the Total Anger (TA) from pre-test to post-test and follow-up test had proven the positive effect of CBT Anger Management Module on anger expression among adolescents in school setting. The results obtained were supported by the previous researches that CBT treatment produces positive outcomes for participants with anger problem from various populations (Lavenberg, 2007; Siddle, Jones, & Awenat, 2003; Taft, Murphy, King, Musser, & DeDeyn, 2003).

Further improvement identified at the follow-up test which held one month after the completion of the eight weekly anger management intervention had indicated that continuous practices are necessary when needed to obtain a positive outcome. The reduction in mean values had clearly proven positive improvement on anger expression among adolescent with anger problem in the school setting. The result is also consistent with Lavenberg's (2007) meta-analysis on effects of cognitive behavioural anger intervention had helped to reduced aggressive behaviour significantly.

Subsequently, an independent-samples t-test was used to compare the significant differences between male and female adolescents in anger expression before the intervention, after the intervention, and at follow-up. The result in this study had shown significant difference on anger expression before the CBT interventions for both genders. The statistical analysis had shown a higher mean value of TA on male respondents which explained that the male adolescents had higher anger

expression than the female adolescents before the CBT intervention. The result obtained is consistent with a few previous research studies such as Stiffler (2008); Plant, Hyde, Keltner, and Devine (2000), which also found that generally men demonstrated anger more often than woman. Similarly, research by Burney (2006) had also found that male adolescents expressed anger more overtly than female adolescents, and their forms of anger expressions often involved weapons, threat, gang fighting and vandalism. Male adolescents view overt expressions of anger like hyper-masculinity may create the impression of their masculinity or toughness (Cassidy & Stevenson, 2005; Swanson, Cunningham, & Spencer, 2003). Furthermore, male adolescents were socialized to believe that not to lose their masculine identity. Therefore, it is right to use violence when being provoked or when they feel that their masculinity has been challenged (Kalish & Kimmel, 2010).

The result in this study also revealed significant difference on anger expression between male and female adolescents even after the intervention. The significant difference found may due to the nature of different learning styles and abilities between males and females in terms of engagement, learning rate and retention (Magon, 2009). Besides, a study by Gurian and Steven (2004) also identified that males and females think and learn in different ways. However, both male and female respondents also shown a reduction in their mean value of TA at post-test as compared to pre-test. The further reduction in mean value of TA at post-test intervention had proven that the CBT interventions had a positive effect on anger management.

On the other hand, there is no significant difference in anger expression between male and female respondents were found at the follow-up test. The reductions in the mean value of TA for both male and female respondents had clearly explained that the CBT interventions in the module had a positive effect on anger expressions. Continuous practice to master the interventions learned is needed to enable the respondents to be more capable in managing their anger. This study is consistent with Sweet (2010) that high success rate will be observed if learned skills are applied properly and routinely (Sweet, 2010).

The positive improvement on anger expression for both male and female respondents was also supported by the interview feedbacks obtained from the respondents, counsellors, and discipline teachers from the four participated schools. All the counsellors and discipline teachers had revealed that they have seen positive behavioural improvement among the respondents who had completed the CBT interventions. There are no more new discipline cases related to anger problem recorded in the school Discipline Record Book for the past one month period. The feedback results obtained had strongly affirmed the credibility of the quantitative results. All the respondents had also managed to identify the appropriate CBT interventions which worked effectively in helping them to overcome their anger problem.

Implications and Limitations

This study has provided significant implications in various aspects. Firstly, it has significant contributions to the researchers in terms of research design, to those who are interested to develop a new module, to the counselling personnel, and to the students who have problems with anger management. Secondly, good rapport and trust developed between the counsellor and their clients are important to ensure the counselling intervention process can be carried out smoothly and successfully. Thirdly, to obtain a more promising outcome, the adolescents need to be committed in their attendance throughout the intervention sessions and must have self-motivation to apply the skills they acquired in their daily practices. Fourthly, this module is comes in handy for the counsellors, practitioners, social workers and those who handle adolescents with anger problem because it provided with various interventions. It enables them to help adolescents to identify their own intervention options as their on-going anger control plan. Finally, this module has no gender bias and it is easy to follow. Each session was provided with clear objectives, systematic instructional procedure, activities and worksheets for homework.

Conversely, there were several limitations that needed to be acknowledged. Firstly, the attributing improvements to the anger group were challenging because the success or failure much depends on respondent’s total commitment throughout intervention sessions. Secondly, only adolescents between 15 to 16 years of age were involved in this study, thus, the results of this study are insufficient to represent the true status in terms of all ages of adolescent’s population concern. Thirdly, the students’ drop-out rates at the beginning stage of the intervention session was a great challenged to the researcher in term of data collections.

Suggestions for Future Research

Previous researchers had found the effects of etiological factors on adolescents’ anger. Therefore, it would be helpful for future research to focus on how the etiological factors such as academic performance, friends, and family background serve as external factors contributing to adolescents’ anger. Besides, future research may extend to larger study samples to another age group. To evaluate the effects and the durability of the treatment, a longer-term to follow-up the clients’ progress is recommended. Future studies could also look into outside evaluation on respondent’s progress by their family. Involvement of family members to rate the respondents’ anger before and after the interventions are

necessary because home is another context apart from school in which respondents' anger may be reinforced. Data on how others perceive participants' improvement in their behaviour would contribute more meaningful information about the effect of CBT intervention for anger management in and out of the sessions.

CONCLUSION

In conclusion, anger may be a normal and healthy emotion, but when anger over-ruled a person's life, making them destructive or act violent, then anger is a big problem. It does not only destroy a person's life, but it will also impact everyone and everything around them. One can break the anger cycle by learning how to manage their anger in a more constructive and effective way with appropriate interventions. However, the first thing they must do is to admit that they have an anger problem and needed help. This adapted CBT anger management module is a useful guide to them. The findings in this study have proven that the interventions in this module are able to help an angry person to manage their emotions and their anger for a healthy and happy life.

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